has been cut through, and almost encircling it may be seen the thin-bedded variety, with its apparent stratification tangential to the mass from which, by decomposition, it evidently was derived. The true stratification of this bed of gneiss appears to be more nearly horizontal and less contorted than that of any of the rocks of the vicinity of Philadelphia.

*A New Locality for Lignite.*—Mr. Henry Carvill Lewis announced the discovery of lignite, or brown coal, in the limestone valley of Montgomery County, a mile and a-half from the boundary of Philadelphia. He had found it, last June, at Marble Hall, close to the marble quarry, within a few feet of diggings for iron ore. In order to ascertain its extent and geological position more definitely, he had caused a shaft to be sunk 40 feet deep on the property of Henry Hitner, Esq. After passing through 38 feet of decomposed hydromica slate, there was found a stratum 4 feet thick of a tough black fire-clay filled with fragments of lignite. These fragments, sometimes a foot or more in length, lay in all directions in the clay. They had the form of twigs and branches, and, though completely turned into lignite, showed distinctly the grain of the wood. The smaller pieces were generally flattened, and often as soft as charcoal, but the larger ones were quite hard and brittle and had the shining fracture of true coal. It burned with a bright yellow flame. Frequently balls of pyrite occurred with the lignite.

The clay which contained it was underlaid by sand, and appeared to dip south. It had an east and west strike, like that of the limestone and of the iron ores. In appearance it was similar to the sub-Cretaceous plastic clays of New Jersey, which also contained lignite resembling that of Marble Hall. White kaolin and white and red potters' clay occur in the vicinity and are probably of similar age. They are all older than the surface deposits and gravel of the valley.

It was stated that while lignite is not uncommon in the Triassic formation, its occurrence in a Silurian limestone valley is of great interest. Whether referred to Tertiary or Jurassic age, it brings a new geological epoch into this region and revolutionizes our ideas of the age of many of the so-called "Primal" iron ores.

*On Serpentine in Bucks County.*—Mr. Lewis called attention to the fact that while serpentine was abundant in Delaware Co., it had not been recorded as occurring anywhere in Bucks Co. He had recently noticed an exposure of it in that county, near the village of Flushing, Bensalem Township. A narrow dyke of hard, impure serpentine here crosses the road near the Neshaminy Creek. He thought that the genesis of serpentine and its relation to the gneissic rocks was still uncertain.